REMARKS

Claims 7, 9-11, and 13-14 are pending in this application. By this Amendment, claims 7, 10, 11 and 14 are amended, and claims 8 and 12 are canceled. Support for amended claims 7 and 11 can be found, for example, at page 10, line 23 - page 11, line 9, of the originally filed specification. Claims 10 and 14 are amended to properly depend from claims 7 and 11. No new matter is added.

The courtesies extended to Applicants' representative by Examiner Gugliotta and Supervisory Examiner Tarazano at the interview held October 10, 2007, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview.

I. Double Patenting

The Office Action provisionally rejects claims 7-14 on the ground of non-statutory double patenting over claims 9-16 of copending Application No. 10/531,578. Applicants respectfully traverse the rejection.

Because copending Application No. 10/531,578 has not issued, filing a Terminal Disclaimer to obviate a provisional double patenting rejection is premature. See MPEP §706.02(k). Applicants respectfully request abeyance of the double patenting rejection.

II. Claim Rejections Under 35 U.S.C. §103

A. Yamamoto

The Office Action rejects claims 7-14 under 35 U.S.C. §103(a) as being unpatentable over Yamamoto et al. (U.S. Patent No. 6,716,512, "Yamamoto"). By this Amendment, claims 8 and 12 are canceled, rendering their rejection moot. As to the remaining claims, Applicants respectfully traverse the rejection.

Claims 7 and 11 include the features, "the clay contains 1 to 10 parts by mass of the alkali metal source in terms of alkali metal with respect to 100 parts by mass of the aggregate

raw material; and wherein the alkali metal source is selected from the group consisting of potassium hydroxide and sodium hydroxide." Yamamoto does not disclose, teach or suggest these claim features.

According to the present specification, an alkali metal source is dissolved in water contained in the clay to form alkali silicate glass (water glass). The alkali silicate glass functions as the reinforcing agent even after the binder has burnt out, and maintains the mechanical strength of the formed body. See Specification at p. 7, lines 7-20. Furthermore, when the alkali metal exceeds the desired range, the alkali silicate glass formed by the alkali metal fills in pores of the calcinated body, and porosity unfavorably decreases. See Specification at p. 11, line 23 - p. 12, line 2.

Although Yamamoto discloses vitrifying materials that contain alkali metals, such as Na_2O, LiO_2, and K_2O, one of ordinary skill in the art would not have been motivated to specifically choose a vitrifying material that contains alkali metal, because Yamamoto teaches that there is no particular restriction as to the kind of the vitrifying material so long as it melts at 1000°C or more and can form a vitreous material. Additionally, none of the examples provided in Yamamoto disclose the content of the vitrifying material.

Specifically, Yamamoto teaches that there is no particular restriction as to the kind of the vitrifying material so long as it melts at 1000°C or more and can form a vitreous material. The vitrifying material may be, for example, a material which is not vitreous when mixed with refractory particles, etc., is composed of at least one kind of oxide or the like selected from vitrifying materials such as, and provides vitrifying materials such as SiO_2, Al_2O_3, B_2O_3, Na_2O, LiO_2, MgO, K_2O, CaO and the like, and melts with each other and becomes a vitreous material during the firing step, or may be a flit type material which is vitreous per se. See Yamamoto at col. 4, lines 47-56.

Due to the wide-range of available vitrifying materials taught by Yamamoto, one of ordinary skill in the art would not have been motivated to choose an alkali metal source as a vitrifying material, and would not have been motivated to specifically select potassium hydroxide or sodium hydroxide. Additionally, Yamamoto does not teach or suggest the benefits of potassium hydroxide and sodium hydroxide as reinforcing agents.

Furthermore, even if one of ordinary skill in the art had chosen potassium hydroxide or sodium hydroxide, claims 7 and 11 include the feature, "the clay contains 1 to 10 parts by mass of the alkali metal source in terms of alkali metal with respect to 100 parts by mass of the aggregate raw material." Yamamoto discloses four examples wherein each example contains significantly more vitrifying material (and possible alkali metal) than that of claims 7 and 11. See Yamamoto at col. 7, Table 1, Examples 1-4. Yamamoto's Examples 1-4 have 15-35 weight percent of vitrifying material, which constitutes significantly more alkali metal source than is claimed in claims 7 and 11. Thus, Yamamoto does not teach or suggest the claimed amount of alkali metal source.

As Yamamoto does not disclose, teach or suggest each and every feature of claims 7 and 11, claims 7 and 11 would not have been rendered obvious by Yamamto. Claims 9, 10, 13 and 14 variously depend from claims 7 and 11 and, thus, also would not have been rendered obvious by Yamamoto. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Yamamoto in view of Stobbe

The Office Action rejects claims 7, 9, 10, 11, 13 and 14 under 35 U.S.C. §103(a) as being unpatentable over Stobbe et al. (U.S. Patent No. 7,179,430, "Stobbe"). During the interview with Examiner Gugliotta and Supervisory Examiner Tarazano, the Examiners acknowledged that the rejection should have been presented as Yamamoto in view of Stobbe. Applicants respectfully traverse the rejection.

As discussed above, Yamamoto does not teach or suggest each and every feature of claims 7 and 11, because Yamamoto does not provide any motivation to one of ordinary skill in the art to have specifically chosen a vitrifying material that contains an alkali metal source, one of ordinary skill in the art would not have been motivated to specifically select potassium hydroxide or sodium hydroxide, and Yamamoto's examples possible provide significantly more alkali metal than is claimed in claims 7 and 11. Stobbe does not cure the deficiencies of Yamamoto.

As neither Yamamoto nor Stobbe, alone or in combination, teach or suggest each and every feature of claims 7 and 11, claims 7 and 11 would not have been rendered obvious by Yamamoto and Stobbe. Claims 9, 10, 13 and 14 variously depend from claims 7 and 11 and, thus, also would not have been rendered obvious by Yamamoto and Stobbe.

C. Yamamoto in view of Noda

The Office Action rejects claims 8 and 12 under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Noda et al. (U.S. Patent No. 7,041,358, "Noda"). By this Amendment, claims 8 and 12 are canceled, rendering their rejection moot.

D. Yamamoto in view of Park

The Office Action rejects claims 7, 8, 11 and 12 under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Park et al. (U.S. Patent No. 5,914,294, "Park"). By this Amendment, claims 8 and 12 are canceled, rendering their rejection moot. As for the remaining claims, Applicants respectfully traverse the rejection.

As discussed above, Yamamoto does not teach or suggest each and every feature of claims 7 and 11. Park does not cure the deficiencies of Yamamoto. Because neither Yamamoto nor Park, alone or in combination, teach each and every feature of claims 7 and 11, claims 7 and 11 would not have been rendered obvious by Yamamoto and Park. Claims 9, 10, 13 and 14 variously depend from claims 7 and 11 and, thus, also would not have been

rendered obvious by Yamamoto and Park. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

E. Yamamoto in view of Joulin

The Office Action rejects claims 7, 9, 10, 13 and 14 under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Joulin et al. (U.S. Patent No. 6,582,796 "Joulin"). Applicants respectfully traverse the rejection.

As discussed above, Yamamoto fails to disclose, teach or suggest each and every feature of claims 7 and 11. Joulin fails to cure the deficiencies of Yamamoto.

The Office Action asserts that Joulin teaches the addition of an alkali metal source, among other compounds, to a mix containing silicon carbide for making a ceramic honeycomb structure. See Office Action at p. 8, paragraph 30.

However, claims 7 and 11 include the feature, "wherein the clay contains 1 to 10 parts by mass of the alkali metal source in terms of alkali metal with respect to 100 parts by mass of the aggregate raw material." On the other hand, Joulin prefers 18 to 15% of a simple oxide that could be an alkaline metal. See Joulin at col. 2, lines 13-15.

As discussed above, the present specification discloses that when the alkali metal exceeds the desired range, the alkali silicate glass formed by the alkali metal fills in pores of the calcinated body, and porosity unfavorably decreases. See Specification at p. 11, line 23 - p. 12, line 2. Thus, Joulin would not have cured the deficiencies of Yamamoto, because Joulin teaches a skilled artisan to use significantly more alkali metal, which is unfavorable in the claimed invention.

Thus, neither Yamamoto nor Joulin, alone or in combination, teach or suggest each and every feature of claims 7 and 11. Therefore, claims 7 and 11 would not have been rendered obvious by Yamamoto and Joulin. Claims 9, 10, 13 and 14 variously depend from claims 7 and 11 and, thus, also would not have been rendered obvious by Yamamoto and

Joulin. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

F. Yamamoto in view of Domesle

The Office Action rejects claims 7 and 11 under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Domesle et al. (U.S. Patent No. 6,710,014 "Domesle"). Applicants respectfully traverse the rejection.

As discussed above, Yamamoto does not teach or suggest each and every feature of claims 7 and 11. Domesle does not cure the deficiencies of Yamamoto.

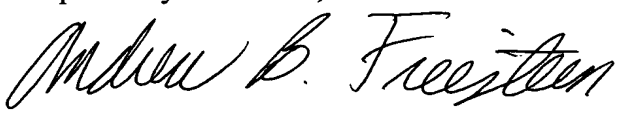
As neither Yamamoto nor Domesle, alone or in combination, teach each and every feature of claims 7 and 11, claims 7 and 11 would not have been rendered obvious by Yamamoto and Domesle. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Petition for Extension of Time

Date: January 8, 2008

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